



NEW GAMING DEVICE SUBMISSION PACKAGE

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NEW GAMING DEVICE SUBMISSION

(In Accordance with Regulation 14.020 through 14.100)

Any manufacturer desiring to obtain approval of a new gaming device must have a current license from the State Gaming Control Board(GCB) to act as a manufacturer of gaming devices. A manufacturer may seek licensing through the State GCB Applicant Services.

A licensed manufacturer requesting approval for a new gaming device must have established a new game financial account balance of at least \$3000 with the Board. The approval process, as set forth in Regulation 14, consist of a Lab evaluation, minimum 60 day field trial, and Board and Commission review and approval. This process requires 6 months minimum to complete. Laboratory fees for the test and evaluation of a new gaming device are assessed at the rate of \$75 per hour. Expenses for Lab personnel traveling to new game approval hearings and court recorder charges relating to those device hearings are prorated against the accounts of the manufacturers represented at the hearings.

At no time during the approval process shall the manufacturer of the new gaming device collect any revenue for operation of the device. During the field trial the location hosting the trial will collect 100% of any generated revenue.

Upon request, a fully functioning production type model of the gaming device must be delivered to the GCB Electronic Services Division which is located at 555 E. Washington Avenue, Suite 1800, Las Vegas, Nevada, 89101. The following materials must be submitted prior to initiation of the approval process.

Submitted Material

Each submission must include, in addition to other items or information as the chairman may require:

- 1) The manufacturers name, address, phone number and FAX number;
- 2) A list of the persons authorized to communicate with the Board or the Laboratory relative to a new gaming device. Identify each persons organizational position;
- 3) A complete, comprehensive, and technically accurate compliance report which describes and explains in both technical and lay language of the manner in which the device operates, and satisfies all the requirements of the Technical Standards for Gaming Devices and Regulation 14 (Adopted: 07/89. Amended: 11/20/97, 01/27/00.);

- 4) Completed Hardware and Software data-entry modification request sheets;
- 5) Completed New Gaming Device Operator Selectable Options checklist;
- 6) Completed New Gaming Device Subcontractor checklist;
- 7) A statement under penalty of perjury that, to the best of the manufacturer's knowledge, the gaming device meets the standards of 14.040 (Adopted: 07/89. Amended: 11/20/97, 01/27/00.);
- 8) A copy of all executable software, including data and graphic information, and a copy of all source code for programs that cannot be reasonably demonstrated to have any use other than in a gaming device, submitted on electronically readable, unalterable media;
- 9) A copy of all graphical images displayed on the gaming device including, but not limited to, reel strips, rules, instructions and paytables;
- 10) Any necessary hardware and software to reproduce programming; and
- 11) A letter from a licensee agreeing to conduct a field trial of the new gaming device at their location. The number of machines to be limited to no more than eight (8) devices.

Applicable Documents

- 1) Regulation 14 (Adopted: 07/89. Amended: 11/20/97, 01/27/00.). Governs the licensing of manufacturers and distributors; to provide for the manner of licensing manufacturers and distributors, approving of gaming devices, associated equipment, and new games; to provide for reporting distribution of gaming devices.
- 2) Technical Standards for Gaming Devices(Adopted: 07/89. Amended: 11/20/97.). Outlines performance requirements for gaming devices.
- 3) Device compliance report outline. This document details the required compliance with applicable regulation and technical standards.
- 4) General instructions for requesting gaming device modifications.

Applicable Forms

- 1) Hardware and Software data-entry modification request sheets.
- 2) New Gaming Device Operator Selectable Options checklist.
- 3) New Gaming Device Subcontractor checklist.

OUTLINE FOR A NEW GAMING DEVICE COMPLIANCE REPORT

Device Description:

Describe the new game in sufficient detail for a lab person to understand. Include the sequence of events for game play, coin-in limits, denomination, credit usage, and describe the universe of total events the game is based upon (52 cards, four 64 stop reel strips, etc.). Is the winner payout based upon the concept of coin multiplier, buy-a-pay, multiple line, or some other system? If the element of player skill is involved, can its effect on the game payback percentage be calculated or estimated.

Unique Characteristics:

Describe any unique or unusual characteristics of this device. How is this device different in physical design or in its manner of play from previously approved gaming device.

Technical Standards and Regulation 14:

Include a complete description of how the device meets all of the Technical Standards for Gaming Devices and Regulation 14 (Adopted: 07/89. Amended: 11/20/97, 01/27/00.);

Technical Standard [1.020] Electrical Interface Immunity

Does the device exhibit total immunity to electrostatic discharges (ESD) of up to 20, 000 volts on surfaces exposed to players?

Describe any interruption, disruption, loss of information or component failure that may occur due to ESD of up to 27,000 volts.

Describe the effects of power loss and recovery as well as the effects of voltage spikes and noise on the AC power supply lines.

Explain why the random number generator (RNG) and the random selection process are impervious to externally generated interference. (ESD, electro-magnetic, radio frequency, associated equipment communications).

Technical Standard [1.030] Coin Acceptor and Receiver

Describe the coin-in handler and how it detects slugging, stringing, spooning, and other cheating methods.

What physical devices are used to detect inserted coins (LEDs, switches, etc.)? Upon what basis does the receiver determine the validity of an inserted coin (size, weight, thickness, metallic content, etc.)?

Describe the error codes and device response to COIN-IN JAM, INAPPROPRIATE COIN-IN, and REVERSE DIRECTION COIN-IN errors.

What denomination wagers can be placed? How is the denomination set? What are the coin-in limits? Does the device allow more than \$3000 to be accepted via the coin acceptor before a wager is made?

Technical Standard [1.040] Hopper

Describe the coin-out detection device (LEDs, switches, etc.). What steps are taken to eliminate cheating of the detection device?

Describe the error codes and device response to COIN-OUT JAM, EXTRA COINS PAID OUT, HOPPER RUNAWAY and HOPPER EMPTY.

Describe the hopper payout limits.

Describe methods available to determine if the hopper is full, and what activates the drop diverter (weight switch, coin level sensor, etc.)

Technical Standard [1.050] Physical Security

Describe the methods used to prevent and to identify illegal entry into the device. Include the codes generated and device response to DOOR OPENING, DOOR CLOSING, DROP DOOR OPEN, etc.

Describe what critical game circuitry has been mounted in secure enclosures. How can an end user install locking mechanisms on the enclosures

Technical Standard [1.060] Communication with Associated Equipment

Describe all communications between the game and outside equipment (progressive controller, data gathering system, etc.). Explain why good or erroneous signals from associated equipment can not adversely effect the operation of the gaming device.

Identify selectable jackpot options (single, multiple, progressive, etc.).

Identify all jackpot signals that are sent to progressive jackpot controllers. Describe how they go through a combination of at least 8 time and magnitude logic changes to indicate that a legitimate jackpot has been hit by the gaming device.

Technical Standard [1.070] Error Conditions

Describe the error code and the response of the device to each of the following error types: POWER RESET, DOOR OPENED, DOOR CLOSED, RAM ERROR, PROGRAM ERROR, RAM CORRUPTION, HOPPER RUNAWAY, EXTRA COINS-OUT, REVERSE COIN-IN, LOW RAM BATTERY, REEL SPIN ERROR, REEL INDEX ERROR.

What other types of errors are detected and displayed by the device?

What steps are required to reset each of the above listed errors? Which errors are self correcting? Which require attendant intervention? Describe any data losses or changes due to an error reset.

Include a copy of the device error codes that are to be affixed inside the gaming device. Describe attendant activated external game controls (key switch, door switch, etc.) and identify their functions.

List attendant activated internal game controls (switches, push buttons, etc.) and identify their functions.

Technical Standard [1.080] Control Program Requirements

Fully describe the method used by the device to self test its control programs for corruption (CRC, 16 bit checksum, MD5, SHA, etc.). Describe the confidence or accuracy factor that can be attributed to the tests. Identify the game state or specific time during game play when they are invoked. Include a copy of the source code of the routine that checks the control program for corruption. The device control programs must be fixed and unalterable by the device.

Describe in detail the method used to check for corruption of information stored in RAM that relates to play and final outcome of the PRIOR GAME OUTCOMES, RANDOM NUMBER GENERATOR OUTCOME, CREDITS AVAILABLE FOR PLAY, ERROR STATES AND JACKPOT STATES. Identify the game state or specific time during game play when the RAM integrity test is invoked. Include a

copy of the source code of the routine that checks the game for corruption. What is the response of the gaming device when RAM corruption is detected?

The present game and nine prior games must be available for recall, showing all critical game information and how it relates to the game that was played. Sufficient information should be stored to resolve any uncertainty in patron disputes over how the present and past specific games are actually played and the end results of game play. what wagers were placed, what cards were dealt, what was held, how many credits existed, what payments were made, what is owed, what were the winning combinations, etc. Games with a variable number of intermediate steps per game may satisfy this requirement by providing the capability to display the last 50 play steps.

Describe the recall display. What action is required to recall the games? How many prior game plays can be recalled? What indications exist to clarify which game is being displayed in the recall.

Identify all conventional (EPROM) memory devices by label, size, type, board location, and hex address range as seen by the microprocessor.

Identify all non-conventional (CD-ROM, Harddrive) memory devices by size, type, and location.

Identify all RAM memory by size, type board location and hex address range as seen by the microprocessor. Describe which RAM chips are non-volatile or battery-backed. Describe the circuitry and components used to maintain the non-volatile RAM (batteries, EEPROM, etc.).

Identify all CPU's by type, usage, clock frequency, and board location. If any ROM memory is contained in a CPU chip, describe its address range and its function.

Identify the device's built in self test and diagnostic routines. How are these tests activated and identified.

Technical Standard [1.090] Safety

What manufacturing standards and practices have been followed to assure that players will not be subjected to electrical, mechanical or fire hazards?

How is the device electrically fused or fault protected? How much AC and DC leakage current flows when the AC cord ground wire is disconnected?

Identify any environmental conditions that would limit satisfactory gaming device performance (power, temperature, humidity, lighting, etc.).

Technical Standard [2.010] Accounting Requirements

Describe any methods that can be used to change the device payback percentage (program change, soldered jumpers, software settable top award values, etc.).

List and describe all software selectable device options (buttons, keypads, etc.).

List and describe hardware selectable device options. What are the differences in theoretical payback percentages for each of the different coin play amounts? Does the device have electronic meters (at least 6 digits) for storing the number of game plays in each category of wager (1 Coin games, 2 Coin Games, etc.) if the difference in theoretical payback percentage is greater than 4% between the min and max coins wagered?

Technical Standard [2.020] Accounting of Inappropriate Coin-Ins

What is the response of the device to inappropriate coins-in? How does the device return coins or accumulate credit for extra coins in?

How are these coins accounted for? Do they register on coin-in and coin-out meters? What provisions have been made to minimize inappropriate coins-in?

Technical Standard [2.030] Accounting of Hopper Payouts

Does the device count coins paid out as the result of an EXTRA COIN PAY or a HOPPER RUNAWAY? How are these coins accounted for in the device metering? Are the counts displayed?

What are the hopper payout limits for the device? Do they permit the gaming establishment to comply with published IRS regulations?

Technical Standard [2.040] Meters

Does the game have non-resettable hard meters for at least 6 digits that accumulate IN, OUT, and DROP totals? Do the meters exhibit at least a 0.1 percent performance accuracy? Describe any additional hard meters.

Does the game have soft meters of at least 8 digits for accumulative storage of IN, OUT, and DROP totals? What additional soft meter information is accumulated?

Do the COIN-IN meters accumulate all coin and credit transactions that result in wagers? Do the COIN-OUT meters accumulate all coin and credit transactions paid by the gaming device for winnings combinations? Will the in and out meters always correctly reflect the percentage hold of the device regardless of the play methods? Do the DROP meters accumulate all coins that have been diverted to the drop?

Describe the steps needed to display all soft meter information? How are the soft meters cleared or reset.

What other game performance statistical information is stored? What steps are required to display statistical information? What steps are required to clear statistical information?

Describe the meters used to store and display the number of game plays since power was turned on and the number of game plays since the door was closed. What steps are needed to recall this information? If these meters reach their max value do they remain at max value until the occurrence of the appropriate event?

How is the following metered information continuously displayed for the player: number of COINS or CREDITS WAGERED, number of COINS or CREDITS WON, number of COINS PAID by the HOPPER, number of CREDITS AVAILABLE? Is any display shared by more than one set of meter readings?

How long will stored electronic meter information be preserved when no power is available to the gaming device?

Technical Standard [2.050] Credit Play Requirements

Describe any non hopper payout methods (printer tickets, account credit, etc.).

Does the game use credits? What is the coin in credit limit? What is the credit accumulation limit from winning payouts? Does the device make partial payouts from wins over a certain credit amount? Can coins be inserted if credit limit has been reached? Describe any selectable options that affects the credit feature.

Do inserted coins accumulate directly on the credit meter or coins wagered?

Can credits from inserted coins be cashed out directly or must they be wagered? If they can be cashed out directly, does the game use a coin receiver that accepts coins based on their metallic content?

Can credits be accumulated by inserting currency? Does the bill acceptor accumulate the total number of each denomination bill that is accepted? Describe any currency acceptor or change device.

What is the aggregate total of collectible credits that can be accumulated from the insertion of currency (should not exceed \$3,000)?

What is the maximum amount which may be wagered on a single game? What is the maximum amount that may be wagered on special conditions such as double down bets, etc.?

Technical Standard [2.060] Award Cards

Include one copy of the par-sheet for the submitted device to this report.

Outline the methods used to identify and display award amounts for each specific winning combination. Are awards identified in denomination units, dollars, cents or in some other units? Is the award card displayed on the glass or the video screen?

How does the device reflect any change in award value that may occur in the course of play?

Attach a copy of the device display that shows the rules of play and the payoff schedule.

Regulation 14.040

The theoretical pay out percentage of the device must be mathematically demonstrable. This percentage must not be less than 75 percent for each wager available. If a percentage of less than 75 percent is present, indicate such and attach a request for a waiver of the 75 percent standard.

Provide the calculations upon which the determination of the probabilities of winning combinations were based. If player skill is involved, describe any known methods of play that would produce the best long-term average return to players.

Describe all random number generation processes and all game outcome selection processes. Identify algorithm used and show step by step implementation of the random number generator in the source code. Attach a copy of the source code used for the random number generation and the random selection process. Identify RAM address locations, as the CPU sees them for random number generator seeds, parameters and data outcomes, etc.

Is every possible permutation or combination of game elements which produce winning or losing combinations available for random selection at the start of each game? If the game is a live game counterpart, does the appearance of each symbol or game element match the probability or appearance of identical elements in a live game. Are the appearances of all random game elements independent of PREVIOUS GAME OUTCOME, AMOUNT WAGERED, or STYLE OF PLAY?

What testing was conducted to check for patterning in the output of the random selection process? Are there any secondary decisions made which would affect the outcome of the game prior to it being displayed to the player.

Are any functions of the device altered as a result of internal computation of the hold or payback percentages of the device?

Additional Materials:

- 1) Electrical Schematics
- 2) Hardware Drawings
- 3) User Manuals
- 4) Twenty copies of 8" X 10" color photographs that portrays an overall visual image of the nature of the device. If additional pictures are required to convey important game detail, they may be snapshot size.
- 5) A copy of all glass graphics and physical reel strips to scale.